

Johannsen



ENTERED

1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/636,259C

DATE: 03/07/2003 P.6

TIME: 08:08:38

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

```

3 <110> APPLICANT: Small, Kersten
4   Liggett, Stephen
6 <120> TITLE OF INVENTION: Alpha-2A-Adrenergic Receptor Polymorphisms
8 <130> FILE REFERENCE: 10738-44
10 <140> CURRENT APPLICATION NUMBER: 09/636,259C
11 <141> CURRENT FILING DATE: 2000-08-10
13 <160> NUMBER OF SEQ ID NOS: 26
15 <170> SOFTWARE: PatentIn version 3.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 1350
19 <212> TYPE: DNA
20 <213> ORGANISM: Homo sapiens
22 <400> SEQUENCE: 1
23 atgggctccc tgcagccgga cgcgggcaac gcgagctgga acgggaccga ggcgccgggg 60
25 ggcggcgccc gggccacccc ttactccctg caggtgacgc tgacgctggt gtgcctggcc 120
27 ggctgtctca tgctgtctac cgtgttcggc aacgtgctcg tcatcatcgc cgtgttcacg 180
29 agccgcgcgc tcaaggcgcc ccaaaacctc ttcttggtgt ctctggcctc ggccgacatc 240
31 ctggtggcca cgctcgtcat ccctttctcg ctggccaacg aggtcatggg ctactggtag 300
33 ttcggaagg cttggtgcga gatctacctg gcgctcgacg tgctcttctg cacgtcgtcc 360
35 atcgtgcacc tgtgcgccat cagcctggac cgctactggt ccatcacaca ggccatcgag 420
37 tacaacctga agcgacgccc gcgcgcgcatc aaggccatca tcatcaccgt gtgggtcatc 480
39 taggcccgtca tctccttccc gccgctcatc tccatcgaga agaagggcgg cggcggcgcc 540
41 ccgcagccgg ccgagccgcg ctgcgagatc aacgaccaga agtggtacgt catctcgtcg 600
43 tgcatcggtt ccttcttcgc tccctgcctc atcatgatcc tgggtctacgt gcgcatctac 660
45 cagatcgcca agcgtcgcac ccgctgcca cccagccgcc ggggtccgga cgccgtcgcc 720
47 gcgcgcgccc ggggcaccga gcgcaggccc aacggtctgg gcccagagcg cagcgcgggc 780
49 ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc 840
51 gcgcgcgccc ggccgcgcga caccgacgcg ctggacctgg aggagagctc gtcttccgac 900
53 cagcgcgagc ggcctccagg gcccgcgaga cccgagcgcg gtccccgggg caaaggcaag 960
55 gcccagagcg gccaggtgaa gccgggcgac agcctgccgc ggcgcgggcc gggggcgacg 1020
57 gggatcggga cgccggctgc agggccgggg gaggagcgcg tcggggctgc caaggcgtcg 1080
59 cgctggcgcg ggcggcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtggtcacg 1140
61 ggagtgttcg tgggtgtgctg gttccccctt ttcttcacct acacgctcac ggccgtcggg 1200
63 tgctccgtgc cagcagcgtc cttcaaattc ttcttctggt tcggctactg caacagctcg 1260
65 ttgaaccggg tcatctacac catcttcaac cagatttcc gccgcgcctt caagaagatc 1320
67 ctctgtcggg gggacaggaa gcggatcggt 1350
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 1350
72 <212> TYPE: DNA
73 <213> ORGANISM: Homo sapiens
75 <400> SEQUENCE: 2
76 atgggctccc tgcagccgga cgcgggcaac gcgagctgga acgggaccga ggcgccgggg 60
78 ggcggcgccc gggccacccc ttactccctg caggtgacgc tgacgctggt gtgcctggcc 120

```

## RAW SEQUENCE LISTING

DATE: 03/07/2003

PATENT APPLICATION: US/09/636,259C

TIME: 08:08:38

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

```

80 ggcctgctca tgctgctcac cgtgttcggc aacgtgctcg tcatcatcgc cgtgttcacg 180
82 agccgcgcgc tcaaggcgcc ccaaaacctc ttcctgggtg ctctggcctc ggccgacatc 240
84 ctggtggcca cgctcgatcat ccctttctcg ctggccaacg aggtcatggg ctactggtac 300
86 ttcggcaagg cttggtgcca gatctacctg gcgctcgacg tgctcttctg cacgtcgctc 360
88 atcgtgcacc tgtgcgccat cagcctggac cgctactggt ccatcacaca ggccatcgag 420
90 tacaacctga agcgacgcc gcgccgcac aaggccatca tcatcaccgt gtgggtcatc 480
92 tcggccgtca tctccttccc gccgctcatc tccatcgaga agaaggcgcg cggcggcggc 540
94 ccgcagccgg ccgagccgcg ctgcgagatc aacgaccaga agtgggtacgt catctcgctg 600
96 tgcctcggtc ctttcttcgc tccctgcctc atcatgatcc tggctctacgt gcgcatctac 660
98 cagatcgcca agcgtcgcac ccgcgtgcca cccagccgcc ggggtccgga cgccgtcgcc 720
100 gcgccgccgg ggggcaccga gcgcaggccc aagggtctgg gccccgagcg cagcgcgggc 780
102 ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc 840
104 gcgccggccg ggccgcgcga caccgacgcg ctggacctgg aggagagctc gtcttccgac 900
106 cagcccgagc ggccctccagg gccccgcaga cccgagcgcg gtccccgggg caaaggcaag 960
108 gcccagcgca gccaggtgaa gccgggcgac agcctgcccg ggcgcgggcc gggggcgacg 1020
110 gggatcggga cgccggctgc agggccgggg gaggagcgcg tcggggctgc caaggcgctc 1080
112 cgctggcgcg ggccgcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtgggtcatc 1140
114 ggagtgttcg tgggtgtgctg gttccccctt ttcttcacct acacgctcac ggccgctcgg 1200
116 tgctccgtgc cagcacgcgt cttcaaattc ttcttctggt tcggctactg caacagctcg 1260
118 ttgaaccggg tcatctacac catcttcaac cacgatttcc gccgcgcctt caagaagatc 1320
120 ctctgtcggg gggacaggaa gcggatcgtg 1350

```

123 &lt;210&gt; SEQ ID NO: 3

124 &lt;211&gt; LENGTH: 450

125 &lt;212&gt; TYPE: PRT

126 &lt;213&gt; ORGANISM: Homo sapiens

128 &lt;400&gt; SEQUENCE: 3

```

130 Met Gly Ser Leu Gln Pro Asp Ala Gly Asn Ala Ser Trp Asn Gly Thr
131 1 5 10 15
134 Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
135 20 25 30
138 Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
139 35 40 45
142 Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
143 50 55 60
146 Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile
147 65 70 75 80
150 Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
151 85 90 95
154 Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
155 100 105 110
158 Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala Ile Ser
159 115 120 125
162 Leu Asp Arg Tyr Trp Ser Ile Thr Gln Ala Ile Glu Tyr Asn Leu Lys
163 130 135 140
166 Arg Thr Pro Arg Arg Ile Lys Ala Ile Ile Ile Thr Val Trp Val Ile
167 145 150 155 160
170 Ser Ala Val Ile Ser Phe Pro Pro Leu Ile Ser Ile Glu Lys Lys Gly
171 165 170 175
174 Gly Gly Gly Gly Pro Gln Pro Ala Glu Pro Arg Cys Glu Ile Asn Asp

```

## RAW SEQUENCE LISTING

DATE: 03/07/2003

PATENT APPLICATION: US/09/636,259C

TIME: 08:08:38

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

```

175          180          185          190
178 Gln Lys Trp Tyr Val Ile Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro
179          195          200          205
182 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
183          210          215          220
186 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
187 225          230          235          240
190 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Asn Gly Leu Gly Pro Glu
191          245          250          255
194 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
195          260          265          270
198 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
199          275          280          285
202 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Ser Asp His Ala Glu Arg
203          290          295          300
206 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
207 305          310          315          320
210 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
211          325          330          335
214 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
215          340          345          350
218 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
219          355          360          365
222 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
223          370          375          380
226 Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
227 385          390          395          400
230 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
231          405          410          415
234 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
235          420          425          430
238 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
239          435          440          445
242 Ile Val
243          450
246 <210> SEQ ID NO: 4
247 <211> LENGTH: 450
248 <212> TYPE: PRT
249 <213> ORGANISM: Homo sapiens
251 <400> SEQUENCE: 4
253 Met Gly Ser Leu Gln Pro Asp Ala Gly Asn Ala Ser Trp Asn Gly Thr
254 1          5          10          15
257 Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
258          20          25          30
261 Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
262          35          40          45
265 Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
266          50          55          60
269 Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/636,259C

DATE: 03/07/2003

TIME: 08:08:38

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

```

270 65          70          75          80
273 Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
274          85          90          95
277 Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
278          100          105          110
281 Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala Ile Ser
282          115          120          125
285 Leu Asp Arg Tyr Trp Ser Ile Thr Gln Ala Ile Glu Tyr Asn Leu Lys
286          130          135          140
289 Arg Thr Pro Arg Arg Ile Lys Ala Ile Ile Ile Thr Val Trp Val Ile
290 145          150          155          160
293 Ser Ala Val Ile Ser Phe Pro Pro Leu Ile Ser Ile Glu Lys Lys Gly
294          165          170          175
297 Gly Gly Gly Gly Pro Gln Pro Ala Glu Pro Arg Cys Glu Ile Asn Asp
298          180          185          190
301 Gln Lys Trp Tyr Val Ile Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro
302          195          200          205
305 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
306          210          215          220
309 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
310 225          230          235          240
313 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Lys Gly Leu Gly Pro Glu
314          245          250          255
317 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
318          260          265          270
321 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
322          275          280          285
325 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Ser Asp His Ala Glu Arg
326          290          295          300
329 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
330 305          310          315          320
333 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
334          325          330          335
337 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
338          340          345          350
341 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
342          355          360          365
345 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
346          370          375          380
349 Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
350 385          390          395          400
353 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
354          405          410          415
357 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
358          420          425          430
361 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
362          435          440          445
365 Ile Val
366          450

```

## RAW SEQUENCE LISTING

DATE: 03/07/2003

PATENT APPLICATION: US/09/636,259C

TIME: 08:08:38

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

```

369 <210> SEQ ID NO: 5
370 <211> LENGTH: 22
371 <212> TYPE: DNA
372 <213> ORGANISM: Homo sapiens
374 <400> SEQUENCE: 5
375 ttaccatc ggctctccct ac 22
378 <210> SEQ ID NO: 6
379 <211> LENGTH: 23
380 <212> TYPE: DNA
381 <213> ORGANISM: Homo sapiens
383 <400> SEQUENCE: 6
384 gagacaccag gaagaggttt tgg 23
387 <210> SEQ ID NO: 7
388 <211> LENGTH: 20
389 <212> TYPE: DNA
390 <213> ORGANISM: Homo sapiens
392 <400> SEQUENCE: 7
393 tcgtcatcat cgccgtgttc 20
396 <210> SEQ ID NO: 8
397 <211> LENGTH: 23
398 <212> TYPE: DNA
399 <213> ORGANISM: Homo sapiens
401 <400> SEQUENCE: 8
402 cgtaccactt ctggctgttg atc 23
405 <210> SEQ ID NO: 9
406 <211> LENGTH: 24
407 <212> TYPE: DNA
408 <213> ORGANISM: Homo sapiens
410 <400> SEQUENCE: 9
411 gccatcatca tcaccgtgtg ggtc 24
414 <210> SEQ ID NO: 10
415 <211> LENGTH: 23
416 <212> TYPE: DNA
417 <213> ORGANISM: Homo sapiens
419 <400> SEQUENCE: 10
420 ggctcgtcgc ggccttgccct ttg 23
423 <210> SEQ ID NO: 11
424 <211> LENGTH: 22
425 <212> TYPE: DNA
426 <213> ORGANISM: Homo sapiens
428 <400> SEQUENCE: 11
429 gacctggagg agagctcgtc tt 22
432 <210> SEQ ID NO: 12
433 <211> LENGTH: 23
434 <212> TYPE: DNA
435 <213> ORGANISM: Homo sapiens
437 <400> SEQUENCE: 12
438 tgaccgggtt caacgagctg ttg 23
441 <210> SEQ ID NO: 13

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/636,259C

DATE: 03/07/2003  
TIME: 08:08:39

Input Set : A:\10738-44.ST25.txt  
Output Set: N:\CRF4\03072003\I636259C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:19; N Pos. 7

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/636,259C

DATE: 03/07/2003

TIME: 08:08:39

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\03072003\I636259C.raw

L:507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0